

Application No.: 10/511,162
Inventor: Winterling et al.
Docket No.: 53429

Amendments to the Claims:

The following Listing of Claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A process for preparing a polyamide comprising: by
heat conditioning a mixture comprising titanium dioxide to produce a titanium dioxide
catalyst having a BET surface area in the range from 5 to 30 m²/g determined according to the
German standard DIN 66 131 volumetrically by the multipoint method,

reacting a mixture comprising which comprises a monomer having which has a nitrile group and has at least one other functional group capable of forming a carboxamide group, ~~and comprises with water [,.]~~ in the presence of the conditioned titanium dioxide as catalyst, ~~wherein the which comprises using titanium dioxide has a whose BET surface area, determined to the German standard DIN 66 131 volumetrically by the multipoint method, is in the range from 5 to 30 m²/g~~

wherein the conditioned titanium dioxide catalyst has an equivalent catalytic activity when compared with the unconditioned titanium dioxide under identical process parameters.

2. (original) A process as claimed in claim 1, where the titanium dioxide catalyst has a BET surface area in the range from 15 to 30 m²/g.

3. (previously presented) A process as claimed in claim 1, where the monomer has a nitrile group and, as at least one other functional group capable of forming a carboxamide group, has at least one group selected from the group consisting of nitrile group, carboxamide group, carboxylic acid group, ester group, and amino group.

4. (previously presented) A process as claimed in claim 1, where the monomer has been selected from the group consisting of dinitrile, nitrilcarboxamide, nitrilcarboxylic acid,

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nitrilocarboxylic ester, aminonitrile, and mixtures of these.

5. (previously presented) A process as claimed in claim 1, where the monomer is an aliphatic compound selected from the group consisting of alpha,omega-dinitrile, alpha,omega-nitrilocarboxamide, alpha, omega-nitrilocarboxylic acid, alpha,omega-nitrilocarboxylic ester, alpha,omega-aminonitrile, and mixtures of these.

6. (previously presented) A process as claimed in claim 1, where the monomer has been selected from the group consisting of adiponitrile, 5-cyanovaleramide, 5-cyanovaleric acid, C1-C4-alkyl cyanovalerate, 6-aminocapronitrile, and mixtures of these.

7. (previously presented) A process as claimed in claim 1, where the monomer has been selected from the group consisting of adiponitrile, 5-cyanovaleramide, 5-cyanovaleric acid, 6-aminocapronitrile, and mixtures of these.

8. (previously presented) A process as claimed in claim 3, where the monomer has been selected from the group consisting of dinitrile, nitrilocarboxamide, nitrilocarboxylic acid, nitrilocarboxylic ester, and mixtures of these and is used together with a diamine, the molar ratio of the monomer mentioned to the diamine mentioned being in the range from 0.9:1 to 1:0.9.

9. (original) A process as claimed in claim 8, where the diamine used comprises a compound selected from the group consisting of 1,2-diaminoethane, 1,3-diaminopropane, 1,4-diaminobutane, 1,5-diaminopentane, 2-methyl-1,5-diaminopentane, 1,6-diaminohexane, 1,7-diaminoheptane, 1,8-diaminooctane, 1,9-diaminononane, 1,10-diaminodecane, and mixtures of these.

10. (new) The process of claim 1 wherein said titanium dioxide catalyst comprises moldings having an average length of from 5 to 20mm and a diameter of from 1 to 6mm.

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11. (new) The process of claim 10 wherein said titanium dioxide catalyst comprises moldings having an average length of 10mm and an average diameter of 4mm.
12. (new) The process of claim 1 wherein the mixture that is heat conditioned comprises titanium dioxide and tungsten oxide.
13. (new) The process of claim 12 wherein the mixture that is heat conditioned comprises up to 40% by weight tungsten oxide.
14. (new) The process of claim 1 wherein the mixture comprising titanium dioxide is heat conditioned at 500° C for 20 hours.